

## CALIFORNIA DEPARTMENT OF PESTICIDE REGULATION



*Protecting people and the environment*

# 100 YEARS OF PROGRESS

Dear Friends:

This year marks the tenth anniversary of the creation of the California Department of Pesticide Regulation – California’s first statewide, independent agency charged with regulating pesticides to protect human health and environmental quality. Perhaps more notably, 2001 is the 100th anniversary for pesticide law in California.

This year also marks the 120th anniversary of the state’s County Agricultural Commissioners and the 80th year they have worked with the Department to enforce pesticide laws at the local level.

As we enter California’s second century of pesticide regulation, we renew our commitment to effective pest management within the context of vigorous public health and environmental protection. New science and better analytical tools offer tremendous power to identify the presence of chemicals in the environment – even at de minimus levels – as well as the risks they pose. Our challenge – and our mandate – is to manage those risks and assure that Californians enjoy a clean, healthy and sustainable environment.

DPR and our commissioner partners are focusing on reducing use of the most toxic pesticides and promoting safer alternatives. From integrated pest management in schools to grants that promote development and dissemination of less-risky pest management strategies, we emphasize biological controls and safer chemicals. We have created a new branch to pursue these approaches.

We are also expanding and accelerating our efforts to assess the human health risks of older pesticides, identify and control pesticides that may be toxic air contaminants, and launch effective measures to reduce pesticide pollution in ground water, lakes and streams. Coupled with stronger enforcement of pesticide laws, these initiatives will take us to the next level of environmental protection.

More fundamentally, DPR has embarked on an effort to re-engineer our way of doing business. We are working with our commissioner partners to be more responsive to the public and the regulated community, provide better information, and do it faster. Our strategy is to use the power of the Internet wherever possible – from licensing pest control advisors, to providing pesticide illness data, to tracking registration status. DPR’s ultimate goal is to match the “24/7” business model that sets the standard for the private sector.

Many exciting changes are under way at DPR, grounded in our charge from Governor Davis to use good science and enforce the law. This progress report summarizes our work in 2000 and describes major projects planned for 2001.



Paul E. Helliker  
*Director*



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# THE UNIQUE ROLE OF PESTICIDES

**PESTICIDES PLAY A UNIQUE ROLE** in environmental protection. Contradicting the usual preventive approach, pesticides are toxic by design and deliberately released into nature. This paradox is explained by the fact that pesticides – when used properly – protect people and their environment from pests – animal, plant or microbial – that threaten human health and the balance of nature. Indeed, nature created the first chemical pesticides, produced by some plants and animals to repel their natural enemies. Over time, people have observed, adapted, and improved upon natural pest management.

Like most human endeavors, the beneficial use of pesticides depends upon information and sound judgment. Scientific knowledge of pesticides continually evolves and improves. California has embraced a scientific approach in developing the strictest and most comprehensive pesticide regulation program in the nation.

The California Department of Pesticide Regulation (DPR) is the state's lead authority for pesticides. DPR has received national and international recognition for its work. While all pesticides must legally receive federal approval before use, DPR requires its own review and registration process to meet higher California standards.

Once a pesticide is approved, DPR and the County Agricultural Commissioners enforce the nation's most stringent pesticide laws. Due to the size and diversity of California agriculture, DPR relies on a close working relationship with the commissioners. They serve as local enforcement agents for state pesticide laws and regulations, and they are integrally involved in many DPR programs. For example, the commissioners issue site-specific permits required before many pesticides can be used, and they conduct inspections of pesticide applications.

In addition to supervising these local enforcement programs, DPR monitors pesticides – from the farm field to the grocery shelf – to assure the safety of workers and consumers. As a final step, DPR continuously re-evaluates its programs, emphasizing risk reduction and, whenever possible, less use of pesticides in favor of more natural pest controls.



*California has*

EMBRACED A SCIENTIFIC

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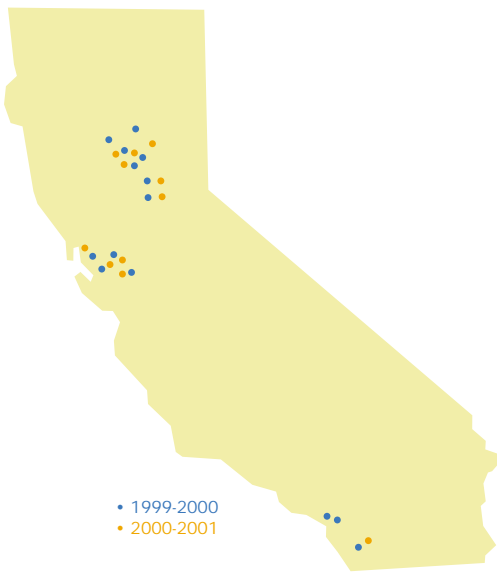
PROGRAM IN THE NATION.



## PROTECTING PEOPLE AND THE ENVIRONMENT

ONE GOAL DRIVES ALL DPR POLICIES AND PROGRAMS – to better protect people and the environment.

Our work spans a broad range of regulatory activity and scientific analysis that aims to support safer, smarter pest management strategies. In 2001, DPR and the County Agricultural Commissioners will commence or continue major initiatives to reduce reliance on fumigant pesticides, assess and improve water quality, assist people with special pesticide concerns, and improve workplace safety.



### Surface water monitoring

DPR is conducting surface water-related projects in the Sacramento and San Joaquin rivers, Alameda County and the San Francisco Bay Estuary, and Orange, Los Angeles and San Diego counties.

### Reducing the impact of fumigants

*Measured in pounds, fumigants represent about one-fourth of all agricultural pesticides used in California. Before planting crops, farmers use fumigants to control disease, weeds and pests in the soil. Since fumigants are both toxic and gaseous, their offsite movement can pose hazards. DPR and the commissioners have launched a coordinated effort to assess hazards of fumigants, reduce environmental impacts, and support research to find less risky alternatives.*

**Methyl bromide regulations tightened.** In late 2000, DPR finalized regulations that established minimum buffer zones around fumigations to better protect neighborhoods, schools, and other sensitive areas. New limits were also set on work hours for fumigation workers. Commissioners are working closely with growers and applicators to help them comply with the new rules.

DPR and the commissioners also began enforcing new rules on structural applications that require more stringent tarping and ventilation procedures, and buffer zones around fumigations.

Both the field and structural regulations are based on short-term exposure to methyl bromide. DPR also began developing regulations to better protect workers who face long-term exposures from nursery, greenhouse, and other uses. Some of these uses will continue after field fumigations are phased out under an international treaty to protect the ozone layer.

**New guidelines for other fumigants.** As the methyl bromide phaseout continues, agricultural users have turned to other fumigants, including metam-sodium. DPR provided new guidelines for County Agricultural Commissioners

*Surface water* PROTECTION PROGRAMS  
RECEIVED \$3 MILLION IN DPR GRANTS.



Photo courtesy of the State Water Resources Control Board

who issue local permits for use of metam-sodium and similar fumigants. The guidelines call for stricter field oversight and clarify instructions on the product labels. DPR will issue buffer zone guidelines early in 2001.



#### Protecting surface water

*DPR's surface water program identifies pesticides that may pollute rivers and other waterways. Our objective is to trace pesticides back to their source, determine how they got into water, and create strategies to prevent future contamination.*

**Surface water program expanded.** In the 1999 and 2000 budgets, the Governor and Legislature provided more than \$3 million to expand DPR surface water protection efforts. With that funding, DPR continues working with the State Water Resources Control Board and its regional water boards to meet state and federal water quality standards. They require the state to determine when levels of pollution are harmful to waterways, identify which waterways are affected, and develop cleanup strategies and timetables. (This process is collectively described as developing "total maximum daily loads" or TMDLs.)

**Monitoring for TMDLs.** DPR's highest surface water priority is helping the regional water boards develop TMDLs. Toward this goal, DPR has contracted with public and private agencies with expertise in surface water sampling. About 18 projects are planned. Monitoring will continue for several years and include thousands of water samples.

Some studies are targeted at urban pollution sources. For example, the City of San Diego and Alameda County are monitoring stormwater runoff for pesticides. Other urban projects in the San Francisco Bay Area, Los Angeles, San Diego and Orange counties will evaluate urban pesticide use and residential practices that send pesticides into drains. On the agricultural front, DPR has funded TMDL projects by the U.S. Geological Survey to study farm pesticide runoff into the Sacramento and San Joaquin rivers.

**More actions on surface water.** DPR's Dormant Spray Program is a major, five-year monitoring project in the Sacramento and San Joaquin River watersheds. DPR and County Agricultural Commissioners are working with growers to see if voluntary efforts can reduce pesticide runoff from winter spraying in orchards. Otherwise, DPR will take regulatory action. An assessment due in the fall of 2001 will guide DPR action. The Sacramento River Watershed

#### *Our goal*

IS TO KEEP

PESTICIDES OUT

OF GROUND AND

SURFACE WATER.





Photo courtesy of the California Rice Commission

## *Rice pesticide* RESIDUES IN WATERWAYS HAVE DROPPED 90% SINCE THE 1980s.

Project also focuses on winter runoff from orchards. DPR is participating in this large-scale, voluntary effort in cooperation with the commissioners, regional water boards, pesticide users and manufacturers, pest management professionals, environmental groups, and others to reduce pesticide residues in the Sacramento and Feather River watersheds.

The Rice Pesticide Program, a coordinated effort by DPR, commissioners, and the rice industry, continues its successful efforts to meet water quality goals in waterways near rice fields. Since the 1980s, rice pesticide residues in these water bodies have dropped by more than 90 percent. DPR staff and commissioners are now evaluating the impacts of new pesticides to assure compliance with water quality goals.



### Preventing ground water contamination

*In 1986, DPR began implementing the Pesticide Contamination Prevention Act (Assembly Bill 2021) by identifying pesticides that contaminate ground water, monitoring wells for contamination, and creating a database of results. DPR has monitored for 33 pesticides and found 12 of them in ground water due to agricultural applications.*

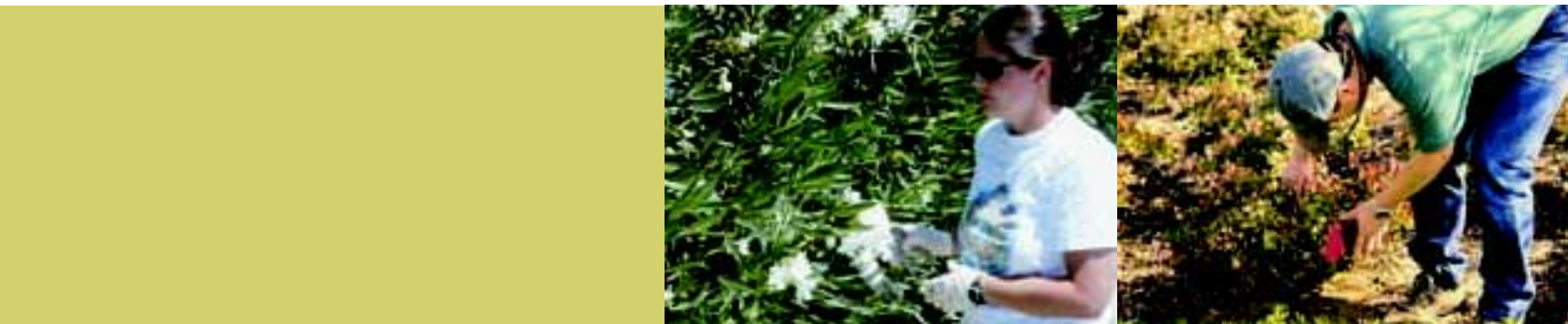
**A new, preventive strategy.** Based on more than ten years of monitoring and detailed data analysis, DPR has developed a new, preventive strategy against ground water contamination. DPR scientists have created a sophisticated computer model – CALVUL for “California vulnerable.” CALVUL uses monitoring data to show where soil, climate, and pesticides interact to threaten ground water – and where regulatory action can prevent contamination before it occurs.

In 2001, DPR will propose regulations that over three years will replace the current patchwork of pesticide management zones with broad, ground water protection areas. While growers will be allowed to use pesticides in vulnerable areas, they must take specific actions to prevent contamination. Commissioners will work with growers and applicators to carry out the new rules.



### Protecting greenhouse harvesters

California is the nation’s leading nursery crop producer, but very few state or national pesticide exposure studies have been conducted for greenhouse workers. Since 1998, DPR scientists have monitored greenhouse workers who harvest roses and carnations sprayed with pesticides. This project, to be completed by the end of 2001, will help DPR determine if more safeguards are needed for greenhouse harvesters.



## Monitoring special situations

*The Department has launched several special projects to address pesticide concerns that arise in unique situations. Project reports are posted online at [www.cdpr.ca.gov/docs/empmp/pubs](http://www.cdpr.ca.gov/docs/empmp/pubs).*

**Protecting tribal resources.** Several Indian tribes in Northern California rely on natural resources – including water, plants, wildlife, and fish – for food as well as traditional crafts such as basket weaving. To address tribal concerns about herbicides used in national forests and on private timberland, DPR and the commissioners are working with the U.S. Forest Service, the California Indian Basketweavers Association, and tribes that use resources in and near Lassen, Eldorado, Stanislaus, and Sierra National Forests. DPR scientists have studied herbicide applications and monitored residues. So far, results from a three-year study show less than 5 percent of herbicides move away from treated areas, although residues may persist for more than 20 months in plants used for basket-making. At the same time, damage from herbicides makes it unlikely such plants will be gathered by basketweavers.

**Investigating Lompoc air.** DPR, the Santa Barbara County Agricultural Commissioner and other agencies are investigating concerns about pesticides and community health in the area of Lompoc. Based on the recommendations of an interagency work group that includes Lompoc residents, DPR is monitoring pesticide air concentrations in and around the town.

To date, DPR has monitored for 29 chemicals and detected 26 chemicals at levels below any immediate health concerns. DPR is now analyzing this data to determine potential health impacts, and the relationship between pesticide concentrations and weather. Additional monitoring is planned in 2001.

**Monitoring sharpshooter campaign.** The glassy-winged sharpshooter, has recently emerged as a major threat to the state's grape industry because it transmits a disease that attacks vines. The California Department of Food and Agriculture has funded pesticide applications in Tulare, Fresno, Sacramento, Contra Costa and Butte counties, supervised by County Agricultural Commissioners, to slow the spread of the sharpshooter. DPR's role is to assure compliance with pesticide laws. DPR monitored air, surface water, foliage, backyard fruits, tank mixtures and sensitive sites for insecticide residues. All residues have been well within safe levels.



*In response*

TO TRIBAL CONCERNS,

DPR MONITORS

PLANTS AND WATER

FOR PESTICIDE RESIDUES.





## Enhancing farm WORKER SAFETY IS A CORNERSTONE OF DPR POLICY.

**Fighting the red imported fire ant.** The red imported fire ant has recently invaded Southern California. The aggressive ant, which lives in large colonies, inflicts a painful sting and poses a potential hazard to humans and animals. The California Department of Food and Agriculture, County Agricultural Commissioners, and vector control districts are treating infested areas. Plant nurseries in quarantined areas are required to treat plants with insecticides before shipment. DPR is monitoring drains, creeks and rivers in Orange County to determine whether insecticide treatments affect aquatic life. To date, results from 18 monthly monitoring reports show almost no insecticide runoff, except when nurseries release water immediately after pesticide use. DPR and others are taking steps to prevent contaminated runoff.



Emergency treatment manual  
Following complaints about emergency treatment of victims in major pesticide incidents, DPR helped the Office of Emergency Services develop a training manual during 2000. DPR scientists provided technical assistance on different types of pesticide-related episodes and the potential hazards for each episode. The new manual will guide emergency personnel in pesticide-related incidents and provide contact persons for pesticide emergencies.

### Safeguarding workers

*DPR continuously evaluates the use of pesticides to assure they do not pose unacceptable risks to people. Our primary focus is on workers whose jobs involve pesticide use, and field workers who are most likely to face exposure to pesticide residues. DPR's Worker Health and Safety Branch monitors residues in the field and the use of pesticide application equipment. The branch also evaluates illness investigations to confirm that workers and the general public are protected.*

**Improving farm worker safety.** By law, warning signs are required around farm fields after certain pesticide applications, and workers must be informed about other hazards. DPR evaluations show inconsistent compliance by growers with these right-to-know rules. DPR will address ways to improve compliance in mid-2001 after discussions with commissioners, farm worker advocates, and grower groups.

DPR also investigated allegations that farm workers have been threatened with the loss of their jobs for reporting unsafe working conditions. DPR and the State Department of Industrial Relations are evaluating the complaint process and working to better coordinate safety investigations.

**Speaking workers' language.** DPR and the commissioners make special efforts to provide safety information to workers with limited English skills. In 2000, DPR provided funding to print thousands of copies of a popular Spanish novella (comic book) on pesticide safety, which the commissioners distributed widely. DPR also revised its worker-safety leaflets (in both English and Spanish) to make them easier to understand. In addition, many commissioners employ bilingual staff.





**Measuring spray equipment risks.** New pesticide application technology allows less pesticide use while making precise, high-concentration spray treatments. To address concerns that this may pose a risk to workers, DPR scientists conducted studies with the new spray equipment. Preliminary findings indicate the new technology does not increase exposure. This could advance the use of more environmentally-friendly equipment. At the same time, DPR scientists are taking a new look at old technology – small, hand-held sprayers – and safety concerns that could prompt regulatory action.

**Field residues analyzed.** After pesticides are applied, workers must stay out of the field from several hours to several weeks (depending on the pesticide). DPR scientists have collected and analyzed crop foliage to determine whether such “reentry intervals” sufficiently protect workers, although California already has the most stringent restrictions in the nation. An analysis of two years of data suggests that some reentry intervals may need to be even more restrictive. DPR will identify those work situations in 2001.



#### Reducing pesticide illnesses

*DPR manages the most extensive pesticide illness monitoring program in the United States. State law requires physicians to directly report any suspected or confirmed pesticide illness, and DPR actively pursues other cases based on worker compensation claims. County agricultural commissioners then investigate every report and relay their findings to DPR. While the system cannot track unreported illnesses, DPR receives extensive data on occupational incidents and uses the data to refine health and safety measures. The data is compiled into an annual summary report available on DPR’s Web site.*

As part of its continuous improvement process, DPR’s Worker Health and Safety Branch has begun a special project to evaluate new sources of data that may reveal unreported pesticide illnesses, including those involving children and some agricultural workers. DPR is conducting a one-time review of hospital discharge records, death certificates and poison control records.



*We operate*

THE MOST EXTENSIVE  
PESTICIDE ILLNESS  
MONITORING PROGRAM  
IN THE UNITED STATES.



## EVALUATING PESTICIDES, ASSESSING RISKS

**BY LAW, DPR MUST REGISTER PESTICIDES** before they can be sold in California. DPR thoroughly evaluates whether a product can be used safely and effectively. And we regularly reassess registered products to assure that their continued use poses no significant risks.

### Achieving data collection goals

After gathering and evaluating health-effects data on older pesticides for more than a decade under the Birth Defect Prevention Act, DPR has passed a major milestone by completing the data collection process for the 200 highest-priority chemicals. DPR scientists can more fully assess possible hazards with this data.

In 2000, DPR also finished collecting environmental fate data for agricultural pesticides used outdoors, as required under the Pesticide Contamination Prevention Act. These studies help DPR determine whether the use of a pesticide may pollute ground water.



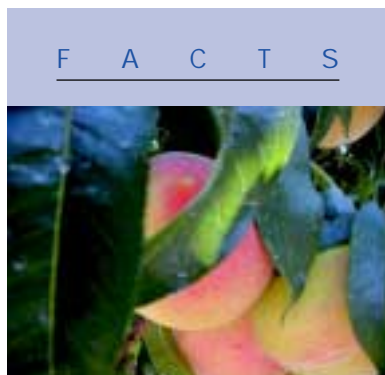
### Risk assessments completed

All substances are toxic at some dose. Risk is the likelihood that a person will react negatively to a particular concentration or dose of a chemical. Through its risk assessment process, DPR determines whether a pesticide presents a significant risk to human health. In 2000, DPR completed risk assessments on methyl isothiocyanate, DEET, deltamethrin, and methidathion. DPR risk assessments for atrazine, thiabandazole, chlorpyrifos, and molinate are nearing completion.



### Protecting air quality

DPR holds authority to prevent hazardous levels of pesticides in air. Under the State's Toxic Air Contaminant (TAC) Program, DPR evaluates airborne pesticide residues and, in cooperation with scientific reviewers, determines potential risks. If DPR identifies a pesticide as a TAC, the Department may consider use restrictions, in consultation with air districts and others. During 2000, DPR contracted with the California Air Resources Board to monitor for three pesticides: benomyl, and the fumigants methyl bromide and 1,3-D. (The fumigants were monitored



### Reduced-risk pesticides registered

DPR expected to register about 19 new pesticide active ingredients in 2000 and early 2001. Four of these are categorized as "reduced risk" because they meet U.S. EPA criteria for posing less risk to people and the environment. Two of the "reduced risk" chemicals are pheromones – artificial scents that confuse insects and disrupt their mating cycles.

*Our scientists* DRAW ON DATA FROM MORE THAN  
160,000 PESTICIDE STUDIES IN THE DPR LIBRARY.



to check the effectiveness of restrictions developed from previous monitoring.) DPR completed risk evaluations for three pesticides: methyl parathion, methyl isothiocyanate, and azinphos-methyl. And DPR added two pesticides to its TAC list: the cotton defoliant DEF and an insecticide, methyl parathion.



#### Setting limits on pesticide residues

Before a pesticide can be used on a food crop, the U.S. Environmental Protection Agency sets a maximum residue – or “tolerance” – allowed on the crop at harvest. In 2000, DPR received new funding and staff to develop tolerances that protect health, are important to California agriculture, and that can quickly be adopted by U.S. EPA. In 2001, DPR’s goal is to help U.S. EPA develop 20 chemical-crop tolerances.



#### Registration backlog reduced

Budget cuts in past years led to a backlog of product registration decisions. In mid-1999, the Legislature increased DPR’s registration program budget. DPR hired and trained new staff to reduce the backlog and expedite final decisions, with an emphasis on lower-risk products. By November 2000, DPR reduced its backlog by more than 50 percent.



#### Responding to pest emergencies

Emergencies occur when an exotic pest invades the state, pest populations suddenly increase, or pests develop a resistance to a particular pesticide. Under these and other conditions, DPR may support requests for an emergency exemption (“Section 18”) that will allow temporary use of a chemical that has not been registered for a specific pest or crop. During 2000, DPR supported some 36 Section 18s that led to federal approval. They included toxic bait for use against the red imported fire ant; an insecticide to protect citrus from the glassy-winged sharpshooter; a fungicide to prevent garlic rust, and four emergency exemptions to help cotton growers adopt less-toxic pest management strategies.



Cutting-edge scientific analytical method also cuts costs

DPR’s Environmental Monitoring Branch annually collects from 1,000 to 3,000 soil and water samples that require pesticide residue analyses. Conventional analyses required expensive equipment and tedious extraction procedures with hazardous solvents. DPR has been developing and evaluating safer, faster, cheaper analytical methods for the last ten years. The result is an assay based on an antibody, enzymatic system similar to disease diagnostic tests and pregnancy test kits. It is known as enzyme-linked immunosorbent assay (ELISA).

Working in collaboration with the University of California, Davis, DPR was the first regulatory agency in the nation to develop and routinely use ELISA. DPR currently uses these assays for soil and water samples in our research and monitoring studies at a savings of from \$100 to \$150 per sample. DPR has documented this successful effort in 12 peer-reviewed scientific journal articles and book chapters.



## WORKING WITH NATURE TO REDUCE RISKS

PESTICIDES ARE TOXIC BY DESIGN, since they must control pests. But effective pest management need not always rely on chemicals that may be harmful if misused. 🌱🌱 Whenever possible, DPR seeks to reduce the use of high-risk chemicals. The Department encourages the use of pest management strategies that are environmentally sound and offer less risk. Many of our strategies involve IPM – integrated pest management. 🌱🌱 IPM works with nature to create an environment where beneficial life flourishes while pests find it difficult to survive. For example, IPM tactics include hand weeding, trash removal, and trapping insects. 🌱🌱 The Department supports IPM through a variety of policies and programs. We encourage IPM practices in schools and other sensitive environments, provide financial support for research to advance IPM knowledge, and publicly recognize groups that make meaningful contributions to the adoption of IPM.



### **IPM Innovators honored**

DPR encourages IPM with annual awards for smart and safe pest management. "IPM Innovator" awards honor urban and agricultural organizations for reduced-risk solutions to pest problems, and for sharing that knowledge within their business communities. DPR presented its seventh annual "IPM Innovator" awards to eight recipients in November 2000.

### Protecting kids at school

*Schools traditionally have used pesticides – to control weeds on the playground, insects in the cafeteria, and rodents in classrooms and crawl spaces. But in recent years, parents and school officials have become concerned about the potential effects of pesticides on school children. DPR's goal is safe school pest control – without pesticides, when possible.*

As part of its Children's Health Initiative, the Davis Administration earmarked about \$600,000 in fiscal 2000-01 for the Department to develop voluntary school IPM programs. DPR will prepare an IPM guidebook, conduct regional and state IPM workshops, and create an IPM advisory group of key school organizations.

DPR supported Assemblyman Kevin Shelley's Healthy Schools Act of 2000. This law complements the Administration's school IPM efforts. DPR already provides some school IPM information on its Web site, and will expand online resources under the law. Among other provisions, the law requires schools to post notices before and after pesticide applications and send parents an annual list of pesticides that may be used at school.



*More than* \$1.3 MILLION IN DPR  
GRANTS WILL BE AWARDED IN 2001.



DPR has awarded more than \$320,000 in grants for IPM programs in schools for IPM guidebooks, training videos and record-keeping systems.

In October, the Department also awarded a two-year, \$120,000 grant to establish an environmental education program in the San Francisco Bay Area, with funding from the U.S. Environmental Protection Agency.



Grants support safer pest management

*From urban lawns to farm fields, Californians need to adopt safer, non-toxic pest management methods. The Department supports the search for effective IPM solutions through its grant programs. Some DPR grants support basic research, others sponsor demonstration projects, and the most successful may graduate to large-scale partnership projects with the Department.*

In January, the Department awarded more than \$588,000 in Pest Management Grants to support 19 environmentally-friendly projects. One grant funds a "Kids in Gardens" project that will introduce classroom lessons on preventing pesticide runoff into streams and rivers. Another will focus on helping farmers work in harmony with their residential neighbors.

The Department expects to award another \$1.3 million in grants early in 2001 with funding from the Legislature. Smaller-scale Pest Management projects that prove successful may be expanded into industry- or statewide projects funded by Pest Management Alliance grants.

In March 2000, the Department awarded \$780,000 to fund nine large-scale Alliance projects. Recipients work directly with DPR staff to bring reduced-risk pest management and IPM into widespread use. Individual grants ranged up to \$100,000 and included projects to stop the spread of red imported fire ants; reduce pesticide use in almonds, walnuts, beets, wine grapes, treefruit, and poultry production; and develop a model IPM program for schools.



F A C T S



Current Pest Management Grants support projects that:

- seek alternatives for strawberry and tomato growers who now rely on the fumigant methyl bromide;
- explore the use of tiny, stingless wasps to control a major fruit pest without the use of harsh pesticides;
- encourage vineyards to establish comprehensive IPM programs that are less pesticide-intensive, and
- protect ground and surface water from pesticide runoff.



## DELIVERING SERVICES, INFORMATION ONLINE

THE INTERNET PLAYS A KEY ROLE in DPR plans to make environmental data more available to the public and to improve our business services. DPR received \$1 million from the Legislature in 2000 to obtain computer hardware that will enhance Web access to pesticide data. It is the first step in long-term plans to provide online services to the regulated community and to allow better public access to searchable databases for pesticide use reports, residue monitoring results, ground and surface water data, and more.

### Task force targets illegal Web sales

The Internet has created new – and potentially illegal – venues for many goods and services. In January 2000, DPR launched an Internet-Mail Order Pesticide Sales Task Force to investigate and prosecute unlawful pesticide sales in California. Plans include amending existing laws and regulations, and educating the regulated community about pesticide laws. DPR's Legal Office directs the task force.

### Licensing goes electronic

*Through its licensing program, DPR works to ensure that professional pesticide users operate safely and effectively. DPR licenses about 200 pilots, 4,400 agricultural pest control advisors, and 8,000 pest control businesses across the state. Licensees must also register with the county agricultural commissioner in any county where they do business – resulting in about 18,000 transactions annually.*

**Streamlining operator registration.** To streamline and improve this process, DPR has created a Web-based “Intent to Operate” system that will start registrations with a single electronic filing. Licensees will go online to provide information such as each business location and company representative, and select all counties of operation. The system will verify business-related data (such as pest control violations), compile a report, and automatically forward the report electronically to each county.

This system will provide greater convenience for licensees. It will help county agricultural commissioners anticipate workloads and plan enforcement activities, such as equipment and records inspections. And it will enable DPR to determine where its licensees are operating. The first phase of “Intent to Operate” goes online by summer of 2001.



### Enhancing licensing, certification

DPR licenses pesticide applicators, pilots, advisors, and businesses. In 2000, DPR automated its examination results process and put the results online. DPR also began posting lists of valid license and certificate holders on its Web site. Updated

*County and chemical* PESTICIDE USE DATA  
ARE AVAILABLE ON DPR'S WEB SITE.



weekly, the lists are a valuable resource to county enforcement programs, licensees, and consumers. DPR also rolled out the first phase of an enforcement and compliance section on its Web site. DPR regularly sends out policy letters to county agricultural commissioners clarifying regulations. Letters issued in the past two years are now posted online.



Download surface water data now

DPR's Surface Water Database includes details on more than 4,600 water monitoring samples collected by various agencies. The samples were collected during the past nine years from rivers, creeks, Delta waterways, agricultural drains, sloughs, and urban storm drains. While the database does not contain comprehensive information on every California waterway, it provides a unique research tool for scientists, regulators, environmental advocates, and others concerned with water quality issues. However, because of the manner in which the data was archived, it was not readily accessible. In 2000, DPR added the Surface Water Database to the Department's Web pages. Data may be downloaded, or the database may be obtained on CD-ROM for a nominal fee.



Making pesticide data available to the public

*DPR's Pesticide Use Report is the largest and most complex database on pesticide use in the world. Since 1990, DPR has collected information on pesticide applications by California growers and commercial applicators. About 2.5 million pesticide use records are submitted annually to the County Agricultural Commissioners, validated, and compiled in DPR's database.*

**Improving data, providing analyses.** DPR completed a major upgrade of the system in 2000, providing online access to most summary use data. For example, the system now allows Web users to search for pesticide data by county and chemical. DPR also upgraded its use report processing system and improved data accuracy. Tentative use data for 2000 is expected to be released in mid-2001. Finally, DPR received legislative funding to conduct ongoing, statistical analyses of pesticide use trends. Such analyses are frequently requested by consumers, researchers, environmental advocates, and industry.



*In 2001,*

DPR PLANS

TO MAKE EVEN

MORE PESTICIDE DATA

AVAILABLE ONLINE.



## ENFORCING PESTICIDE LAWS

**DPR MANAGES THE MOST COMPREHENSIVE PESTICIDE ENFORCEMENT program in the nation. The enforcement branch – with three regional offices – guides and evaluates county programs, licenses and certifies commercial pesticide users, monitors pesticide products for registration and sales compliance, manages an extensive residue monitoring program for fresh produce, and imposes penalties for pesticide law violations. DPR also works in partnership with County Agricultural Commissioners who act as local pesticide enforcement authorities.**

### F A C T S

#### Localized enforcement

As DPR's local enforcement agents, County Agricultural Commissioners annually:

- evaluate, condition, approve, or deny 50,000 permits for restricted-use pesticides,
- certify about 25,000 private applicators,
- conduct 65,000 compliance inspections, and
- take approximately 6,000 formal compliance or enforcement actions.

Approximately 1,000 civil penalty enforcement actions are initiated, tracked, and compiled annually by the counties and DPR regional offices.

#### Enhanced enforcement power

*In 1999, DPR began organizing a team to assess the effectiveness of statewide pesticide enforcement and make recommendations for improvements. DPR's Enforcement Initiative is an ongoing effort to promote more efficient, effective, and consistent enforcement.*

Effective January 1, 2001, the Legislature gave DPR's Director authority to impose civil penalties of up to \$5,000 per violation for serious pesticide incidents or those that involve multiple jurisdictions. The same legislation gave County Agricultural Commissioners new power to suspend or revoke the permits of agricultural pesticide users and businesses that disregard county pesticide fines or other lawful orders.

#### Tracking local actions

*Most pesticide enforcement actions – such as fines – are imposed by County Agricultural Commissioners. For many years, DPR had no centralized system to track these local actions. For example, DPR often could not easily retrieve information when deciding whether to renew the license of a pest control company. This situation also raised concern about consistent enforcement statewide.*

To resolve the problem, DPR received \$400,000 from the Legislature to create an enforcement tracking system. This system, which required three years of planning and testing, collects and tracks all pesticide violations recorded by county agricultural commissioners. In addition to immediate improvements toward fair and consistent pesticide enforcement, the tracking system offers other advantages. For example, DPR can now identify cases where state – rather than local – action would be more appropriate to deal with serious pesticide violations that cross county lines. Improved data quality and review



Consumers may GO ONLINE TO  
CHECK PESTICIDE LICENSE VIOLATIONS.



procedures also help DPR ensure that laws are correctly applied to specific violations. And since the system captures the specific pesticide involved in a violation, pesticide manufacturers have a source for outreach and education, helping their customers use pesticides correctly.

Early in 2001, DPR will post data from the Enforcement Tracking System on its Web site. Consumers may go online to check on agricultural pesticide businesses, individual licensees, and others to determine if they have been fined for pesticide violations anywhere in the state.



#### Targeting pesticide drift

*DPR policy is to prevent pesticide drift whenever possible. DPR's Enforcement Initiative made drift prevention a top priority, since drift may injure people, contaminate the environment, and damage property.*

**Policy strengthened.** During 2000, DPR worked with County Agricultural Commissioners, revising a drift policy to assure that all incidents or suspected incidents will be investigated. The policy outlined the respective investigatory roles of DPR and county agricultural commissioners, and strengthened drift enforcement guidelines. Early in 2001, DPR plans to convene a group of external stakeholders – such as commercial pesticide applicators and environmental advocates – to help improve drift regulations, and to stay up-to-date with changing science and federal initiatives.

**\$150,000 penalty for incident.** In September 2000, DPR approved a \$150,000 settlement with Wilbur-Ellis Co. of San Francisco. The settlement – which was the largest of its kind in DPR history – stemmed from a 1999 pesticide drift incident in Tulare County. Wilbur-Ellis agreed to pay a \$75,000 penalty and fund another \$75,000 in medical treatments for residents of Earlimart who were affected by a metam-sodium drift.

**Sulfur guidelines issued.** Sulfur accounts for about one-third of all pounds of agricultural pesticide applied annually. It is a natural fungicide favored by organic and conventional growers alike.

#### F A C T S

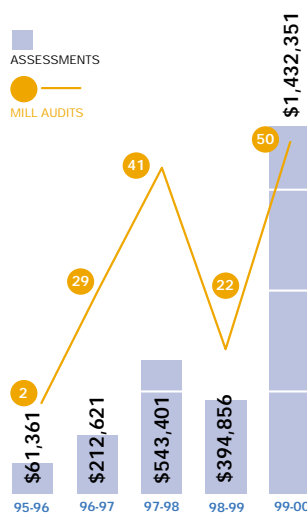


##### Monitoring fresh produce

- DPR tests more produce for pesticide residues than any other state – more than 7,000 samples in a year.
- No residues are detected in more than 60 percent of samples.
- Illegal residues are found in slightly more than 1 percent, and DPR acts quickly to remove that produce from the market.
- Most other samples show residues at less than 10 percent of the federal legal limit, which already includes a margin of safety.



### Audits generate more revenue



DPR imposes a fee ("mill assessment") on pesticide sales to support regulatory programs. The Audit Branch assures that products are legally registered for sale and that mill fees are paid. As DPR conducts more audits, assessments have increased from about \$61,000 in fiscal 1995-96 to more than \$1.4 million in 1999-2000. DPR also received a \$432,000 settlement for mill assessments owed by a subsidiary of Clorox Co. – the second-largest mill debt settlement in DPR history.

Sulfur also is frequently cited as a source of worker injuries (skin rashes) due to its irritating properties. In 1999, DPR began a survey to evaluate sulfur drift complaints and identify problems with application methods. DPR and the commissioners discussed their findings with sulfur users, and sulfur manufacturers responded by suggesting new application techniques to better protect health and the environment.



### Assessing legal compliance

In June 2000, DPR enforcement staff completed three years of surveys in 19 counties to assess industry compliance with state and federal worker safety requirements. DPR and the County Agricultural Commissioners are using data from these surveys to help guide state and county enforcement priorities.



### Linking priorities and work plans

DPR provides funding to the commissioners for enforcement activities that include field inspections, illness investigations, applicator certification, and more. Until recent years, DPR had no formal process to determine if county enforcement activities were meeting local needs and DPR priorities. In 2000, DPR and the commissioners began implementing work plans that provide a better link between effective local enforcement and DPR funding.



### Partnership with Mexico

DPR's Enforcement Branch is working with commissioners, and federal and Mexican pesticide authorities to coordinate cross-border training. DPR enforcement staff met with their counterparts in Mexico during 2000 to study Mexican enforcement activities, and Mexican officials visited California to learn about DPR investigation and inspection techniques.



**Glenn Brank, *Report Editor***

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Pest Management and Analysis Program,  
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California Environmental Protection Agency

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